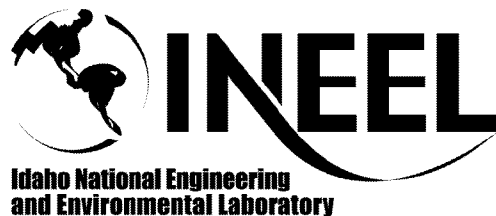


# Plan

## ESH&QA Performance Reporting and Analysis Improvement Plan

Prepared for:  
U.S. Department of Energy  
Idaho Operations Office  
Idaho Falls, Idaho



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Companywide	Plan	For Additional Info: <a href="http://EDMS">http://EDMS</a>	Effective Date: 05/23/03
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## ACRONYMS

BBWI	Bechtel BWXT Idaho, LLC
CFR	Code of Federal Regulations
DEAR	DOE Acquisition Regulation
DOE	U.S. Department of Energy
DOE-HQ	Department of Energy - Headquarters
DOE-ID	Department of Energy – Idaho Operations Office
ES&H	Environment, Safety and Health
ESH&QA	Environment, Safety, Health, and Quality Assurance
ICARE	Issue Communication and Resolution Environment
INEEL	Idaho National Engineering and Environmental Laboratory
ISMS	Integrated Safety Management System
MCP	Management Control Procedure
PDD	Program Description Document
PRD	Program Requirements Document

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## **1. INTRODUCTION**

An Idaho National Engineering and Environmental Laboratory (INEEL) Management Objective is to achieve operational excellence. This excellence must be defined by goals and objectives and measured through processes to support continuous performance improvement. These processes include a comprehensive, integrated, risk based self-assessment program, an issues management program that includes corrective action and lessons learned, and a performance reporting and analysis program. This plan addresses improvements in the Performance Reporting and Analysis Program as a means of ensuring the achievement of operational excellence and assuring functioning feedback (Integrated Safety Management System [ISMS] Core Function 5) processes at the INEEL.

### **1.1 Requirements**

The requirements and expectations for performance reporting and analysis are primarily contained in the following:

- Department of Energy (DOE) Acquisition Regulation (DEAR) 48 Code of Federal Regulations (CFR) 970.5223.1, *Integration of Environment, Safety and Health into Work Planning and Execution*
- DOE Policy 450.5, *Line Environment, Safety, and Health Oversight*
- DOE Order 231.1, Chg. 2, *Environment, Safety, and Health Reporting*
- DOE Order 210.1, Chg. 2, *Performance Indicators and Analysis of Operations Information*

These requirements are contained in the Bechtel BWXT Idaho, LLC (BBWI) contract and are further discussed in Section 2.

### **1.2 Current Program Status**

Currently at the INEEL, performance measurement is being done by a variety of organizations, facilities, and programs. Various weekly, monthly, and quarterly reports containing Environment, Safety, Health and Quality Assurance (ESH&QA) performance information are issued, but not according to defined processes. The overall program is not well defined, including the following: program requirements, roles and responsibilities, performance elements and metrics, methodologies, reporting and response, and assessment and oversight. Since the program is not well defined, knowledge and understanding are inadequate.

In 1999, INEEL initiated a basic trending and analysis process to collect, analyze, trend and report ESH&QA performance data. This process has been evolving to better serve various needs at the INEEL, and with increasing emphasis on providing useful information and analyses in a readily accessible format. During this evolution, the lack of a comprehensive and standardized process was identified as a fundamental weakness. This has led to inconsistencies in metrics selection, data source identification, data collection and analysis techniques, terminology usage, data validation, and data reporting. The implementation of a formalized process is needed to address this fundamental weakness.

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**1.3 Plan Purpose and Scope**

The purpose of this plan is to identify the actions necessary to achieve an effective Performance Reporting and Analysis Program that satisfies DOE requirements and internal operational needs. This plan describes the weaknesses in the current program relative to effectively implementing requirements and the improvements needed to address those weaknesses. The specific work scope and schedule for making these improvements are also provided.

**2. PROGRAM REQUIREMENTS AND GUIDANCE****2.1 Integrated Safety Management System**

DEAR 48 CFR 970.5223.1 requires maintenance, feedback, and continuous improvement of the ISMS. The feedback and improvement process should not only assess the adequacy of ISMS implementation of the specific requirements, but also identify what is needed to update or revise the documentation that defines the requirements. Therefore, documented processes and procedures for feedback and improvement processes in support of ISMS are needed.

Annual review and update of performance objectives, measures, and commitments, consistent with, and in response to, DOE's program and budget execution guidance and direction, is required. Activities relative to this requirement include:

- Selecting appropriate performance goals, measures, and response levels;
- Establishing an effective ISMS feedback and continuous improvement process; and
- Improving the adequacy and effectiveness of the ISMS on a continuing basis in response to DOE oversight and Company self-assessment, including progress in meeting performance measures objectives, and commitments.

Each performance measure should be carefully analyzed and the results considered in the Company annual budget guidance responses. DOE G 450.4-1B Chapter III, Section 4.5 suggests the following types of activities be performed for this review:

- Evaluate the effectiveness of the safety performance objectives, performance measures and commitments. Determine reasons for success or failure of those commitments.
- Review Occurrence Reports and corrective actions for ISMS improvement opportunities.
- Review facility data and identify safety issues to develop improvements required in Site ISMS.
- Review worker and operator suggestions from the Employee Concerns Program and employees' safety organizations.
- Review DOE program and budget execution guidance and direction.
- Review changes to laws, regulations and directives (List A/List B revisions).

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Outstanding issues from previous ISMS verification reviews and assessments and from performance measurement are also reviewed. The results of the reviews are used to determine if performance objectives, measures and commitments need to be updated or revised.

## **2.2 DOE Policy 450.5**

DOE Policy 450.5, *Line Environment, Safety, Health, and Quality Assurance Oversight*, defines the elements of “a robust, rigorous, and credible contractor Environment, Safety and Health (ES&H) self-assessment program linked to the DOE Safety Management System” to include:

- Performance measures and performance indicators,
- Line and independent evaluations,
- Compliance with applicable requirements,
- Data collection, analysis, and corrective actions, and
- Continuous feedback and performance improvement.

## **2.3 DOE Order 231.1, Chg. 2**

DOE Order 231.1, Chg. 2, *Environment, Safety, and Health Reporting*, affirms DOE-Headquarter’s (HQ’s) instruction to contractors to develop, deploy, and use in decision making performance indicators, including ES&H performance metrics. The order further requires the contractor to send to DOE-HQ a copy of the resulting quarterly report.

## **2.4 DOE Order 210.1, Chg. 2**

DOE Order 210.1, Chg. 2, *Performance Indicators and Analysis of Operations Information*, contains the following requirements for contractors:

- Establish a program that identifies, gathers, verifies, analyzes, trends, disseminates, and makes use of ES&H performance indicators to improve the performance of DOE facilities, programs, and organizations.
- Gather, verify, analyze, trend, and disseminate ES&H performance indicator data, including narrative data, which should help assess performance; where appropriate, perform root cause analyses.
- Use analytical ES&H data to base decisions, establish goals, identify performance trends, provide early identification of potential problems, and apply lessons learned and good practices.
- Implement feedback mechanisms for identification and communication of ES&H good practices, lessons learned and corrective actions.
- Maintain a management information system containing appropriate ES&H performance indicator data for historical reference.

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- Periodically assess ES&H performance indicator programs to verify that indicators are accurately measuring performance and are resulting in improved performance.

### **3. PROGRAM WEAKNESSES AND PLANNED IMPROVEMENTS**

Self-assessments of the Performance Reporting and Analysis Program identified weaknesses relative to effectively implementing DOE requirements. Specific weaknesses were identified in the following areas: (1) program definition, (2) performance indicator selection, (3) data analysis and performance assessment, (4) communication and feedback mechanisms, (5) performance improvement, (6) management information system for performance data, (7) program assessments and oversight, and (8) knowledge and understanding of the program. These weaknesses, and the improvements planned to address them, are described in this section.

#### **3.1 Program Definition**

##### **Weaknesses**

In accordance with DOE requirements, a performance reporting and analysis process was initially established and described in Management Control Procedure (MCP)-3521, *Trending Center*, as well as through other implementing procedures that direct performance reporting and analysis for specific purposes. However, the overall program and program requirements are not defined in company level procedures; thus, roles and responsibilities for program development, implementation, and oversight have not been clearly defined.

The processes necessary to maintain and improve the INEEL ISMS have been identified and are described in Program Description Document (PDD)-1004. These processes include the reporting and analysis necessary for determining ISMS performance and establishing performance objectives, measures, and commitments. However, procedures that implement these processes have not been developed.

##### **Improvements**

To address the weaknesses in program definition, the following documents will be developed:

- A PDD that describes the complete program and the implementing documents.
- A program requirements document (PRD) that incorporates and integrates requirements.
- A MCP that implements the performance reporting and analysis processes described in PDD-1004 necessary for ISMS maintenance and improvement.

In addition, MCP-3521 and other implementing procedures will be revised to ensure program requirements are fully addressed and roles and responsibilities are clearly defined.

#### **3.2 Performance Indicator Selection**

##### **Weaknesses**

In cooperation with DOE-Idaho Operations Office (ID), a large number of performance indicators have been identified and are included in regular performance reports. While these indicators provide

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important information about ESH&QA performance, they were not selected through a defined process that considers performance goals and objectives, critical process variables, and leading indicators where possible. Additionally, no process has been defined for developing indicator data and for evaluating and revising indicators as necessary.

**Improvements**

To address these weaknesses, processes will be developed for the identification, development, and revision of ESH&QA performance indicators. These processes will specifically include leading performance indicators, analysis of process variables, and ISMS performance objectives. These processes will be included in the program documents described in 3.1.

**3.3 Data Analysis and Performance Assessment****Weaknesses**

Existing implementing documents contain various requirements for analyzing data and assessing performance and some analysis and assessment are performed. The requirements, however, are not comprehensive, and methodologies for the analysis and assessment have not been well defined.

**Improvements**

To address these weaknesses, requirements for data analysis and performance assessment will be more comprehensively and clearly defined in the program documents described in 3.1. Methodologies for these analysis and assessments will be developed and described in a company level standard or guide, which will also be developed. These methodologies will include identification of repetitive problems, potential problems, generic issues, and performance trends. The methodologies will address the use of root cause analyses to identify performance issues. The Issue Communication and Resolution Environment (ICARE) issues management system will be modified to incorporate the data information system software to more efficiently support data analysis methodologies.

**3.4 Feedback and Communication Mechanisms****Weaknesses**

ESH&QA performance information is issued in various reports by several organizations and at different intervals. Some of these reports are specified in procedures and some are not. Some management briefings of these reports are provided primarily on an ad-hoc or as requested basis. The lessons learned system provides for the sharing of good practices, adverse lessons learned and recommended actions; however, weaknesses in the system have been identified regarding systematic and documented use/implementation of operational information.

**Improvements**

To address the weaknesses in feedback and communication mechanisms, specific, comprehensive, coherent requirements for issuance of performance reports and briefings of management will be defined and included in program documents described in 3.1. To address the lessons learned program weaknesses, the program will be revised to ensure operational information is effectively analyzed and communicated.



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**3.5 Program Improvement****Weaknesses**

The existing Performance Reporting and Analysis Program does not formally address establishing performance goals, making decisions about performance based on performance data, determining actions based on these decisions, or implementing these actions to improve performance.

**Improvements**

Processes and requirements for improving ESH&QA performance, using goal setting and performance information, will be developed and included in the program documents described in 3.1. The development of performance objectives, measures, and commitments relative to ISMS will be specifically included in the MCP, which will implement the ISMS maintenance and improvement mechanisms described in PDD-1004.

**3.6 Management Information System****Weaknesses**

DOE Order 210.1, Chg. 2, requires the maintenance of a management information system that contains appropriate performance indicator data for historical reference. Although much historical performance indicator data is available, there is currently no defined management information system to store this data, no definition of the data that should be included in the system, and no procedures for maintaining the system.

**Improvements**

To address these weaknesses, a management information system for performance indicator data and configuration control plan for maintenance of the system will be developed. The plan will define the data to be maintained in the system.

**3.7 Program Assessments and Oversight****Weaknesses**

The current program does not address the DOE requirement to periodically assess the performance reporting program to verify that indicators are accurately measuring performance and are resulting in improvements in performance. Routine oversight of program implementation is also not addressed.

**Improvements**

Formal requirements and methods for program assessments and oversight will be developed and included in the program documents described in 3.1.

**3.8 Program Knowledge and Understanding****Weaknesses**

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Because the program is not well-defined or effectively implemented, knowledge and understanding of the program is inadequate. In addition, no training has been provided relative to performance reporting and analysis requirements.

**Improvements**

To address these weaknesses, performance reporting and analysis training will be developed for appropriate personnel. The training will be based on the program documents discussed in Section 3.1 and will be provided prior to their implementation.

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**4. WORKSCOPE**

Five primary tasks are necessary to implement the performance reporting and analysis program improvements identified in this plan:

1. Development of improvements for the following processes:
  - a. Performance indicator identification, development, and validation.
  - b. Data analysis and performance assessment.
  - c. Communication and feedback mechanisms for performance assessment.
  - d. Performance improvement mechanisms.
  - e. Program assessment and oversight.
2. Development or revision of the following program documents which include the improved processes identified above and which identify roles and responsibilities:
  - a. A new PDD that describes the improved program and the implementing documents.
  - b. A new PRD that includes program requirements.
  - c. A new MCP that implements the program processes for ISMS maintenance described in PDD-1004.
  - d. A revised MCP-3521, which implements the program requirements.
  - e. A new standard or guide for data analysis and performance assessment.
  - f. A revised MCP-192 that addresses Lessons Learned Program weaknesses.
  - g. Revisions of other implementing procedures as necessary.
3. Development or modification of the following automated systems which support the program:
  - a. An automated system for collection and presentation of data.
  - b. A modification to ICARE that uses the automated system.
  - c. A management information system for historical performance indicator data.
4. Development and delivery of training based on program requirements to ensure knowledge and understanding of program requirements and roles and responsibilities.
5. Implementation of the improved program.

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## 5. MILESTONE SCHEDULE

The work scope identified in Section 4 will be accomplished according to a detailed schedule maintained by the ESH&QA Performance Assurance Directorate. The following table identifies the major milestones of this schedule and target completion dates. All dates beyond the first milestone date are based on successful completion of that first milestone by the target completion date. The amount of effort necessary to meet that first date is uncertain. The schedule may require revision as work to achieve the first milestone progresses.

Action Item Number	Milestone	Responsible Organization	Target Completion Date
26864	Develop improved program processes	Performance Assurance	Complete 8/28/02
26865	Develop/revise program documents for company review	Performance Assurance	June 30, 2003
26866	Obtain approval of program documents	Performance Assurance	July 31, 2003
26867	Develop automated program support systems	Performance Assurance	September 30, 2003
26868	Develop training on revised program and obtain STRIB approval	Performance Assurance	August 31, 2003
26870	Train the target audience on program requirements	Operations Training	September 30, 2003
26871	Implement improved program	Responsible Individuals	September 30, 2003

## 6. CHANGE CONTROL

The Performance Assurance Director has administrative control of this plan, will maintain the master copy, and screen all changes to ensure appropriateness. The Director has authority to approve minor changes that do not substantially change the original intent or results (e.g., moving work scope from one action to another or adding new actions to achieve the desired outcome). Major changes (e.g., eliminating or modifying an action that substantially changes the original intent or results) must be approved by the General Manager of ESH&QA.

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**7. REPORTING**

A final report will be written after all actions have been completed and will include an assessment of the effectiveness of the actions.

**8. REFERENCES**

DOE Policy 450.5, *Line Environment, Safety, and Health Oversight*

10 CFR 830.120, *Quality Assurance*

DEAR 48 CFR 970.5223-1, *Integration of Environment, Safety, and Health into Work Planning and Execution*

DOE Order 210.1, Chg. 2, *Performance Indicators and Analysis of Operations Information*.

DOE Order 231.1, Chg. 2, *Environment, Safety, and Health Reporting*

DOE Order 414.1A, *Quality Assurance*

DOE G 450.4-1B, *Integrated Safety Management System Guide, Chapter IV, Maintaining an Approved ISMS*.

PDD-1004, *INEEL Integrated Safety Management System*